



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D119-646-243
Job Sheet 180145



Part No: D119-646-243

Job Qty: 1 ea

Part Name: AW119 Repl. Skidtube with Heavy Duty Wearplates, Float Compatible -Fits LH or RH



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 6/29/18

Job Tracking No:

Due Date: 8/6/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG IIN-D119-646 REV D, D3905-045 REV E SHEETS 4,5, 7-14 IPP RevA: New issue DD verified by:EC
IPP REV B 12.11.05 (DEOD3905-B-1)(ecn 12-675) DD verf:JLM IPP REV:C 13.03.20 per chg003 ECN13-534
DD verf:JLM IPP REV:D 15.01.19 AS PER ECN-14-628 DD verf:JLM IPP REV:E 16.11.02 chg as per D3905
revD(DEO) DD verf:JLM IPP REV:F 17.05.19 as per dwg D3905 rev.e DD verf:JFS

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea	8/6/18	8/6/18	0.00	0.00	Start Up Skidtubes-1		
110	Skidtubes	1 pcs	8/6/18	8/6/18	0.00	2.07	Skidtubes-1		
120	HandFinish	1 pcs	8/6/18	8/6/18	0.00	1.05	HandFinish1		SA 18-07-09
130	QC	1 pcs	8/6/18	8/6/18	0.00	0.00	QC7-1		DAS 60
150	Skidtubes	1 pcs	8/6/18	8/6/18	0.00	2.07	Skidtubes-1		9-89 M66
155	CNC Bend Skidtubes	1 pcs	8/6/18	8/6/18	0.00	1.20	CNC Bend Skidtube		9-89 M66
165	QC	1 pcs	8/6/18	8/6/18	0.00	0.00	QC5		8K M66
180	Skidtubes	1 pcs	8/6/18	8/6/18	0.00	2.07	Skidtubes-1		8K M66
190	QC	1 pcs	8/6/18	8/6/18	0.00	0.00	QC5		8K M66
200	CNC Bend Skidtubes	1 pcs	8/6/18	8/6/18	0.00	1.20	CNC Bend Skidtube		M66
210	Skidtubes	1 pcs	8/6/18	8/6/18	0.00	1.41	Skidtubes-1		M66
220	QC	1 pcs	8/6/18	8/6/18	0.00	0.00	QC5		8K M66
224	Skidtubes	1 pcs	8/6/18	8/6/18	0.00	3.70	Skidtubes-1		8K M66
225	QC	1 pcs	8/6/18	8/6/18	0.00	0.00	QC5		PS 13-08-03
226	QC	1 pcs	8/6/18	8/6/18	0.00	0.00	QC10		D 13-08-03
227	HandFinish	1 pcs	8/6/18	8/6/18	0.00	1.05	HandFinish2		SA 18-08-03
240	SprayPaint	1 pcs	8/6/18	8/6/18	0.00	0.56	Spray Paint		AB AUG 03 2018
242	Outsource	1 pcs	8/6/18	8/6/18			ATE003-VC	5	N/B
245	QC	1 pcs	8/6/18	8/6/18	0.00	0.00	QC14		N/B
250	HandFinish	1 pcs	8/6/18	8/6/18	0.00	1.05	HandFinish4		BE 18-08-07
260	QC	1 pcs	8/6/18	8/6/18	0.00	0.00	QC5		M 12-08-02
270	HandFinish	1 pcs	8/6/18	8/6/18	0.00	1.49	HandFinish4		BE 18-08-07
280	QC	1 pcs	8/6/18	8/6/18	0.00	0.00	QC5		M 16-08-02
285	HandFinish	1 pcs	8/6/18	8/6/18	0.00	1.05	HandFinish3		BE 18-08-07
286	QC	1 pcs	8/6/18	8/6/18	0.00	0.00	QC5		D 18-08-03
288	DC	1 pcs	8/6/18	8/6/18	0.00	0.00	DC		9-89 AUG 10 2018
290	Packaging	1 pcs	8/6/18	8/6/18	0.00	0.00	Packaging3-1		21 AUG 10 2018
300	QC21-FG	1 Ea	8/6/18	8/6/18	0.00	0.00	QC21		21 AUG 10 2018

Part Op 110 - 1- Inspect Mat'l D2500-1-190 for damage 2- Ensure squareness of ends

Descriptions: 120 - Chemical Conversion Coat per QSI005 4.1

130 - QC7-Inspect Chemical Conversion Coat

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation				Disposition			
				Completed By			
				Lead hand / Supervisor			
				ation			
				inator			
				rong			
				ensions			
				olerance			
				t			
				ssing			
				ence			

Root Cause

Environment	☐	No Re-verification	☐	Pressure/Forced	☐
Design	☐	Operator	☐	Bending	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Conce	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Rippl	☐
Material	☐	Use for Testing	☐	Cuffs	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tu	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐
Past Expiry Date	☐	Manufacturing Process	☐		
Misidentified	☐	Past Due	☐	OTHER :	☐

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CANADA
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DART AEROSPACE

Container No: S089688
Part: D119-646-243
Job No: 180145
Serial No/Batch: S089688
Revision:
Inspector:
Exp Date:
Instructions: FAA STC SR02024SE 15/10/2016, JAA STC LoA P-09-0407-RDIMS.

- 150 - 1- Install drill jig DT9480 drill all x-bolt spacer holes using 3/16 drill first side only. 2- 2nd side, locating from first saddle holes use DT9861 A/B to drill 2nd side fwd saddle holes. 3- 2nd side locating from fwd saddle drill remaining crossbolt spacer holes using DT9477 4- Scribe batch # inside aft end of tube
- 155 - 1- Bend AFT end of tube using CNC Bender 1 and bend prog. D3905 AFT as per dwg D3905. Must use bending Aid DT9538, located 23.25" from Aft end. 2- Ensure bending Aid DT9538 is positioned correctly, that the bender set up in on full wide and that the indexing ridge is covered with graphite grease.
- 165 - QC5- Inspect part completeness to step on W/O
- 180 - 1- Verify dimension of bend as per dwg D3905 2- Buff out marks left from bending. 3- Drill Aft Float bag holes using DT9493 as per dwg D3905 detail G and section F-F, open to finished size 4- Open x-bolt spacer holes to finished size as per dwg (sections D-D and E-E) ***DO NOT OPEN FWD SADDLE HOLES*** 5- Drill Aft wearplate and wearpad holes using DT9546 and DT9545 as per dwg D3905 detail G open to finished size 6- Deburr, blow out chips from inside of tube 7- Bond web in place as per Dwg D3905 & QSI 015. A/R Sikaflex-291 138874 Sikaflex expire date: 10-03-06 Start: _____ Time: _____ Finish: _____ Time: _____ ***** (Adhere for 12 hours) *****
- 190 - QC5- Inspect part completeness to step on W/O
- 200 - 1- Bend Fwd end of tube using bender 1 and bend prog. D3905 & Folio -04 Fwd. Use bending aid DT9544 ensure proper positioning 2- Cut Fwd end of tube as per dwg. ***VERIFY MEASUREMENT BEFORE CUTTING***
- 210 - 1- Buff out marks left from bending 2- Drill Fwd cap holes using DT8215. 3- Open Fwd saddle holes to finished size as per dwg 4- Drill Fwd x-bolt hole and open to finished size using DT9816 5- Drill 1.87" and 3.74 holes using DT10045 A&B locate from FWD saddle hole. (verify measurement) as per dwg. 6- Drill towing hole using DT10047 locate from FWD saddle hole and open to finished size. 7- C-sink FWD cap hole as per detail "C" 10- Deburr, blow out chips from inside of tube.
- 220 - QC5- Inspect part completeness to step on W/O
- 224 - NOTE: TACK IN 2 MOST FWD X-BOLT SPACERS AND TEST FIT FWD GROUND HANDLING FIXTURE. IF FIXTURE FITS WELL THEN PROCEED. FIXTURE DT10091. 1- Countersink x-bolt holes as per dwg 2- Remove alodine prepare for welding 3- Insert x-bolt spacers 4- Weld x-bolt spacer as per dwg A/R Alum rod Batch: 138834 5- Grind welds flush as per dwg 6- Counter bore x-bolt holes as per dwg 7- Deburr 8- Pick D2855-5 cap and transfer drill missing hole. Deburr and identify cap with skidtube batch#.
- 225 - QC5- Inspect part completeness to step on W/O TEST FIT USING FIXTURE DT10091.
- 226 - QC10- Inspect visual per QSI004- ground welds
- 227 - Pressure Wash per QSI005 4.3
- 240 - Spray Painting per QSI005 4.2 ***** AS PER DEO DETAIL "F" NOTE 8, SHEET 8 MASK THIS AREA, DO NOT APPLY PRIMER OR PAINT ***** PRIME AS PER DWG AND QSI 005 4.2 BATCH: 138862 PAINT WHITE AS PER DWG AND QSI 005 4.2 BATCH: 138886
- 245 - QC14- Inspect Spray Paint
- 250 - Assemble as per dwg 1- Install inserts as per Dwg D3905.
- 260 - QC5- Inspect part completeness to step on W/O
- 270 - 1- Install wearpads, gaskets and wearplates as per Dwg D3905. Put sikaflex in insert before installing bolts and washers A/R Sikaflex-240/-291 _____ Sikaflex expire date: _____ 2- install plugs assembly as per dwg. 3- Inspect for foreign objects as per QSI 024 4- Install D2855-3 Cap and seal with Sikaflex. Clean excess adhesive. A/R Sikaflex-240/-291 _____ Sikaflex expire date: _____ 5- Install insert in D2855- Cap. Install cap and seal with Sikaflex. Clean excess adhesive. A/R Sikaflex-240/-291 _____ Sikaflex expire date: _____ 6- Install (2) D5101-041 and (1) D5101-047 as per dwg by using DT10117
- 280 - QC5- Inspect part completeness to step on W/O
- 285 - Wing Walk as per dwg QSI005 4.4 Batch _____
- 286 - QC5- Inspect part completeness to step on W/O
- 288 - Document Control Photocopy bluefile & type labels per PPP D119-646-243 CHG 005
- 290 - Identify as per dwg & Stock Location: _____
- 300 - QC21- Final Inspection - Work Order Release

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D2500-1-190	Ext'n -I' Beam Tube 4"	1 Ea (1 ea)	90-Start up Operation	
D3681-1	Spacer <u>224</u>	8 Ea (8 ea)	90-Start up Operation	<u>5084724</u>
D3903-1	Spacer <u>224</u>	12 Ea (12 ea)	90-Start up Operation	<u>5084655</u>
D3885-3	Float Web	1 Ea (1 ea)	180-Skidtubes	<u>5000623</u>
D2579	Crossbolt Spacer	2 Ea (2 ea)	224-Skidtubes	<u>5051552</u>
D2855-5	Cap	1 Ea (1 ea)	224-Skidtubes	<u>5066894</u>
ALS4-1032-130	Rivnut	10 Ea (10 ea)	250-HandFinish	<u>5007279</u>
ALS4-1032-225	Rivnut	1 Ea (1 ea)	270-HandFinish	<u>5058138</u>
AN3C46A	Bolt	4 Ea (4 ea)	270-HandFinish	<u>502483</u> <u>642</u>
AN3C50A	Bolt	4 Ea (4 ea)	270-HandFinish	<u>5079135</u>
AN3C5A	Bolt	12 Ea (12 ea)	270-HandFinish	<u>5057153</u>
AN4C46A	Bolt	3 Ea (3 ea)	270-HandFinish	<u>5006307</u>
D2855-3	Cap	1 Ea (1 ea)	270-HandFinish	<u>5066002</u>
D3411-3	Washer	16 Ea (16 ea)	270-HandFinish	<u>5049057</u>
D3672-1	Washer, Phenolic	2 Ea (2 ea)	270-HandFinish	<u>5150074</u>
D3847-1	Wearpad	1 Ea (1 ea)	270-HandFinish	<u>5084440</u>
D3847-11	Wearpad	1 Ea (1 ea)	270-HandFinish	<u>5026852</u>

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

D3849-045	* Run-on Landing Wearplate Aft For Float Skidtubes *	1 Ea (1 ea)	270-HandFinish	5089093.
D3849-047	Run-on Landing Wearplate Fwd For Float Skidtubes	1 Ea (1 ea)	270-HandFinish	F154850
D3904-1	Washer	16 Ea (16 ea)	270-HandFinish	509178575
D5101-041	Crossbolt Spacer Assembly	2 Ea (2 ea)	270-HandFinish	F143449.
D5101-047	Crossbolt Spacer Assembly	1 Ea (1 ea)	270-HandFinish	5072225
D5101-3	Insert	6 Ea (6 ea)	270-HandFinish	F158939.
D5101-5	Insert	6 Ea (6 ea)	270-HandFinish	F158796.
MS21043-3	Nut	8 Ea (8 ea)	270-HandFinish	5034415-1
MS21043-4	Nut	3 Ea (3 ea)	270-HandFinish	5089277.
MS24694-C52	Screw	2 Ea (2 ea)	270-HandFinish	5067269-1
NAS1149C0332R	Washer	8 Ea (8 ea)	270-HandFinish	5056493.
NAS1149D0416J	Washer	3 Ea (3 ea)	270-HandFinish	F1131511

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D2500-1-190	1	37	0
	D3681-1	8	219	0
	D3903-1	12	190	0
180-Skidtubes	D3885-3	1	2	0
224-Skidtubes	D2579	2	175	0
	D2855-5	1	81	0
250-HandFinish	ALS4-1032-130	10	13,354	0
270-HandFinish	ALS4-1032-225	1	4,225	0
	AN3C46A	4	122	0
	AN3C50A	4	159	0
	AN3C5A	12	2,030	0
	AN4C46A	3	83	0
	D2855-3	1	26	0
	D3411-3	16	24	0
	D3672-1	2	1,076	0
	D3847-1	1	80	0
	D3847-11	1	21	0
	D3849-045	1	0	0
	D3849-047	1	3	0
	D3904-1	16	90	0
	D5101-041	2	14	0
	D5101-047	1	5	0
	D5101-3	6	56	0
	D5101-5	6	42	0
	MS21043-3	8	1,157	0
	MS21043-4	3	425	0
	MS24694-C52	2	187	0
	NAS1149C0332R	8	5,107	0
	NAS1149D0416J	3	2,986	0

Part Specifications

Specifications could not be found.

Plex 6/29/18 9:24 AM Dart.lajeunesse.marie

004875

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

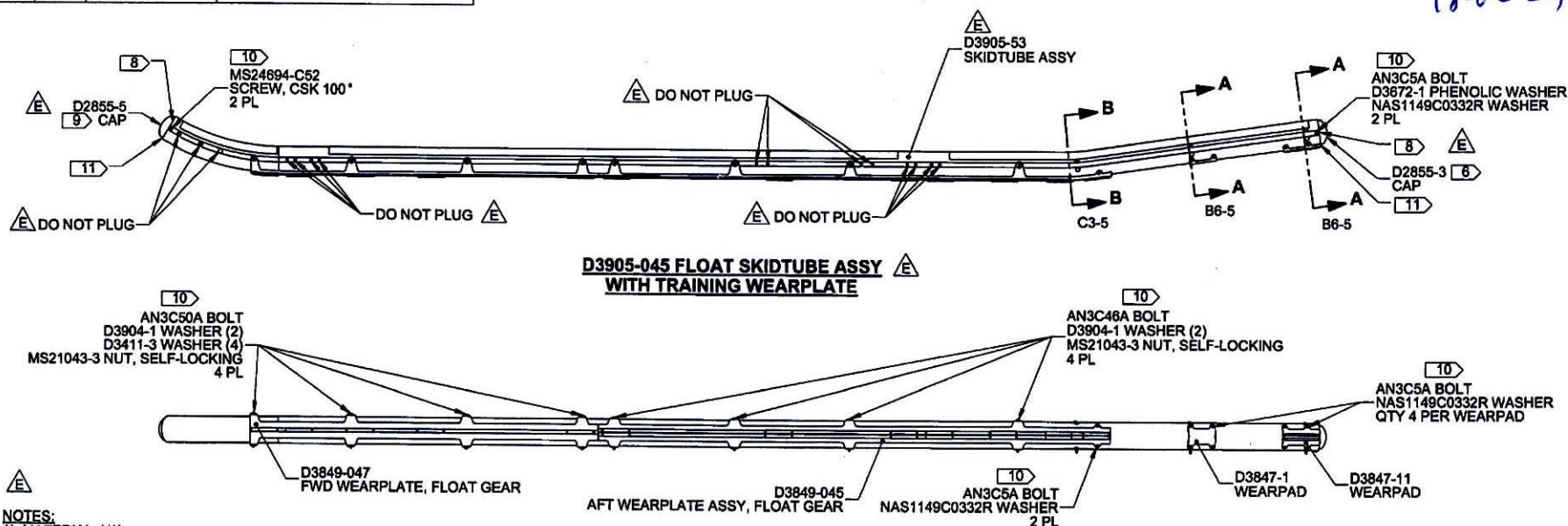
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :							
Misidentified	☐	Past Due	☐								

ITEM	QTY	P/N	DESCRIPTION
	X	D3905-045	FLOAT SKIDTUBE ASSY
1	1	D2855-3	CAP
2	1	D2855-5	CAP
3	16	D3411-3	WASHER
4	2	D3672-1	PHENOLIC WASHER
5	1	D3847-1	WEARPAD
6	1	D3847-11	WEARPAD
7	1	D3849-045	AFT WEARPLATE ASSY, FLOAT GEAR
8	1	D3849-047	FWD WEARPLATE, FLOAT GEAR
9	16	D3904-1	WASHER
10	1	D3905-053	SKIDTUBE SUB ASSEMBLY
11	2	D5101-041	CROSSBOLT SPACER ASSY
12	1	D5101-047	CROSS BOLT SPACER
13	6	D5101-3	INSERT
14	6	D5101-5	INSERT

ITEM	QTY	P/N	DESCRIPTION
15	1	ALS4-1032-225	INSERT
16	12	AN3C5A	BOLT
17	4	AN3C48A	BOLT
18	4	AN3C50A	BOLT
19	3	AN4C48A	BOLT
20	8	MS21043-3	NUT, SELF-LOCKING
21	3	MS21043-4	NUT, SELF-LOCKING
22	2	MS24894-C52	SCREW, CSK 100°
15	12	NAS1149C0332R	WASHER
24	6	NAS1149D0416J	WASHER

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 180145 MLC
18-06-29



- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3905-045" AND BATCH NUMBER PER QSI 044 6.4 ON THE ID OF THE TUBE, BEFORE INSTALLING THE AFT D2855-3 CAP
 - 7) WEIGHT: 48.0 lbs
 - 8) RELIEVE INNER RIDGE OF EXTRUSION, AS NEEDED, TO ALLOW FOR INSTALLATION OF D2855-3 AND D2855-5 CAP ASSY, ALODINE BARE MATERIAL
 - 9) USE D3905-053 SKIDTUBE ASSY TO LOCATE AND BACKDRILL UNDRILLED INSERT HOLE INTO D2855-5 CAP, OPEN HOLE TO Ø0.297, ALODINE BARE MATERIAL AND INSTALL ALS4-1032-225 (OR AKS7-1032-225, OR ALS7-1032-225, OR AKS4-1032-225) INSERT ON INSIDE OF CAP.
 - 10) SEAL FASTENERS WITH SIKAFLEX -241/291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT
 - 11) SEAL MATING SURFACES WITH SIKAFLEX -241/291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT

RELEASED
2017-05-08

APPROVED

DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	WK	EUGENE, OR	
CHECKED	VS	DRAWING NO.	REV. E
MFG. APPR.	DD	D3905	SHEET 4 OF 14
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
DATE	17.03.13	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

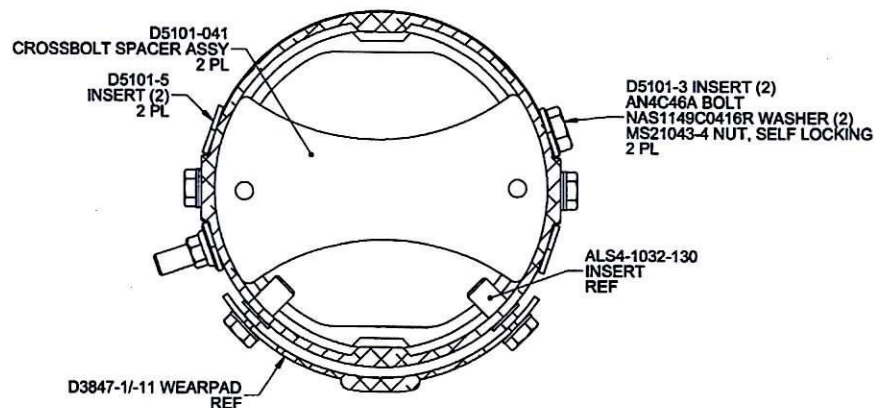
8 7 6 5 4 3 2 1

D

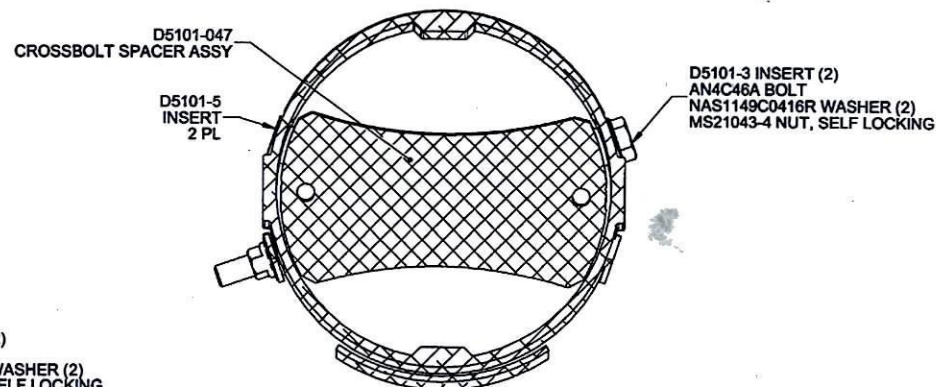
C

B

A



SECTION A-A
SCALE: 12X



SECTION B-B
SCALE 12X

RELEASED
2017-05-08

APPROVED

DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	WK	EUGENE, OR	
CHECKED	VS	DRAWING NO.	REV. E
MFG. APPR.	DD	D3905	SHEET 5 OF 14
APPROVED	HS	TITLE	SCALE
DE APPR.	DB	A119 FLOAT SKIDTUBE ASSY	NTS
DATE	17.03.13	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

8 7 6 5 4 3 2 1

DQA: > _____ Date: _____



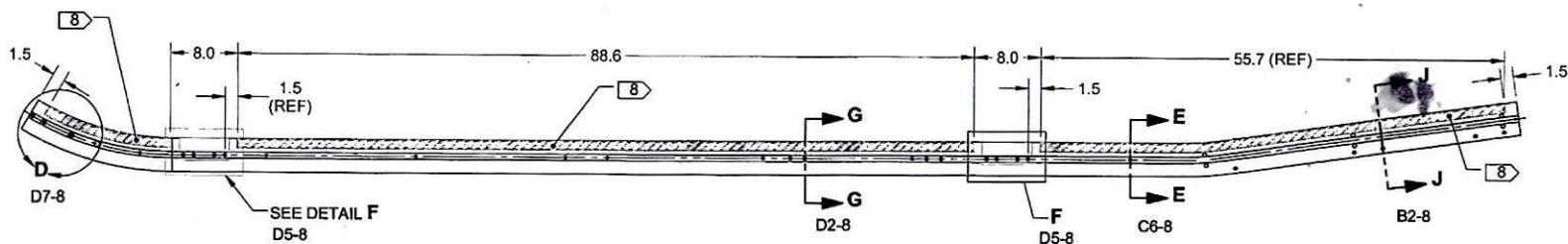
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER :					

ITEM	QTY	P/N	DESCRIPTION
	X	D3905-053	SKIDTUBE SUB ASSY
1	2	D2579	CROSS BOLT SPACER
2	8	D3681-1	SPACER
3	12	D3903-1	SPACER
4	1	D3905-063	SKIDTUBE SUB ASSEMBLY
5	10	ALS4-1032-130	INSERT



D3905-053 SKIDTUBE SUB ASSEMBLY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: PRIME (REF 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2.2.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY AT NEXT ASSEMBLY
- 7) WEIGHT: N/A
- 8) AFTER APPLICATION OF FINISH, PAINT TOP SURFACE OF SKIDTUBE WITH MIL-W-5044 ANTI-SKID PAINT (WING WALK) AS INDICATED TO 0.50" ABOVE LOCATION RIDGE, PER QSI 005 SECTION 4.4

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2017-05-08

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DESIGN	AJS	DART AEROSPACE USA, INC.	
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CHECKED	VS	DRAWING NO.	REV. E
MFG. APPR.	DD	D3905	SHEET 7 OF 14
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
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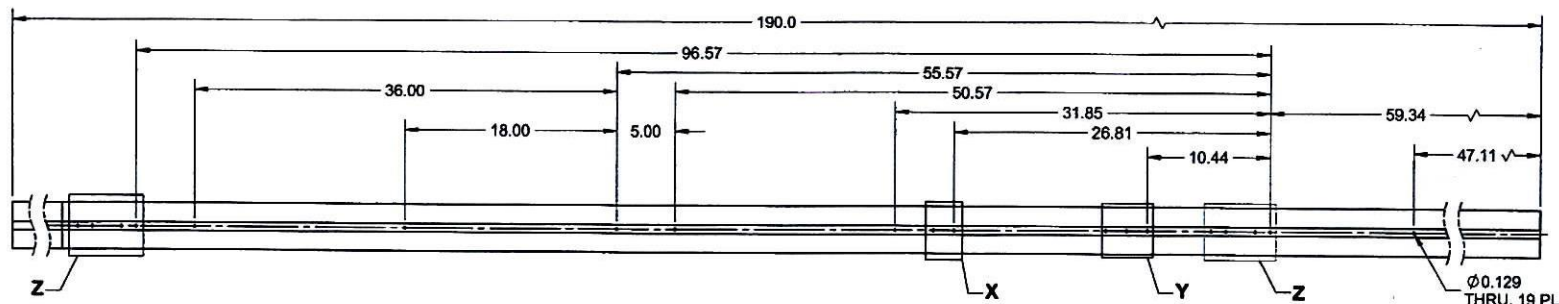
DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

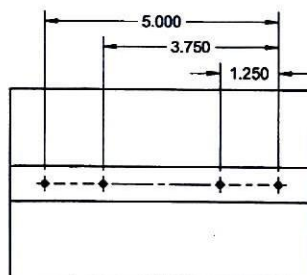
QA Closed: _____ Date: _____

Work Order update only ☐

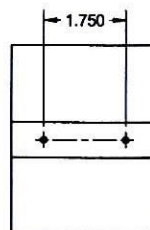
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Date :	Step #:	QTY Effective :		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER :					



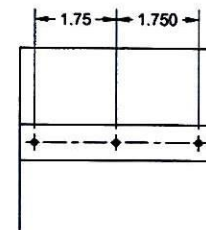
D3905-3 SKIDTUBE PILOT HOLE DETAIL



DETAIL Z
SCALE: 4X



DETAIL X
SCALE: 4X



DETAIL Y
SCALE: 4X

NOTES:

- 1) MATERIAL: MAKE FROM D2500-1-190 EXTRUSION
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY AT FINAL ASSEMBLY
- 7) WEIGHT: N/A

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2017-05-08

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DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	WK	EUGENE, OR	
CHECKED	VS	DRAWING NO.	REV. E
MFG. APPR.	DD	D3905	SHEET 14 OF 14
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
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OTHER :																																																																					



Traveller Change Request

Part#: D119-646-243

Job#: All

Name Jessey Young

Date 7/6/2018

Workcenter Startup skid bases

Operation # 90 - startup

Issue: ☐ Quality

☐ Wrong Routing

☐ Op Description

☐ Missing Information

☐ Material

☐ Other

Change requested: D3681-1 and 3903-T gacers

Should be at op 224.

Name _____

Date _____

Workcenter | _____ |

Operation # _____

Issue: ☐ Quality

☐ Wrong Routing

☐ Op Description

☐ Missing Information

☐ Material

☐ Other

Name _____

Date _____

Workcenter _____

Operation # _____

Issue: ☐ Quality

☐ Wrong Routing

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☐ Material

☐ Other

Change requested: _____